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10/694,420	10/27/2003	Bryan David Haynes	KCX-1120 (19175)	3355
7590	04/30/2008		EXAMINER DANIELS, MATTHEW J	
Mr. Stephen E. Bondura Dority & Manning, P.A. P.O. Box 1449 Greenville, SC 29602			ART UNIT 1791	PAPER NUMBER
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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte BRYAN DAVID HAYNES, and
ERIC EDWARD LENNON

Appeal 2008-1795
Application 10/694,420
Technology Center 1700

Decided: April 30, 2008

Before EDWARD C. KIMLIN, THOMAS A. WALTZ, and
CATHERINE Q. TIMM, *Administrative Patent Judges*.

WALTZ, *Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on an appeal under 35 U.S.C. § 134 from the Primary Examiner's final rejection of claims 1-17, which are the only claims pending in this application (Br. 2). We have jurisdiction pursuant to 35 U.S.C. § 6(b).

According to Appellants, the invention is directed to a process for forming a nonwoven web, including providing a source of fibers and subjecting the fibers to an electrostatic charge by passing the fibers through

an electrostatic unit (Br. 2). The electrostatic unit includes a first side and a second opposed side with an array of protrusions on each side, where the electrostatic charge is alternated from the first side to the second side and back to the first side (Br. 2-3). Independent claim 1 is illustrative of the invention and a copy of this claim is reproduced below:

1. A process for forming a nonwoven web comprising
 - a. providing a source of fibers;
 - b. subjecting said fibers to an electrostatic charge by passing said fibers through an electrostatic unit having a first side and a second side opposed to each other, wherein the electrostatic unit has an array of protrusions on both the first side and the second side of the electrostatic unit;
 - c. alternating the electrostatic charge from the first side to the second side and back to the first side; and
 - d. collecting said fibers on a forming surface to form a nonwoven web.

The Examiner has relied on the following prior art references as evidence of obviousness:

Epstein	US 3,052,009	Sep. 4, 1962
Knight	US 6,365,088 B1	Apr. 2, 2002
Haynes	WO 02/052071 A2	Jul. 4, 2002

ISSUES ON APPEAL

Claims 1-17 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Haynes in view of Knight and Epstein (Ans. 3).¹

¹ We note that Appellants request that only the rejection of claim 1 be reviewed on appeal (Br. 3). However, we also note that Appellants appeal from the final rejection of claims 1-17, all of the claims pending in this

Appellants contend that the Examiner's rejection fails to include a motivation or teaching to combine the cited references, and merely combines elements found in various prior art patents (Br. 3-4).

Appellants contend that Haynes teaches applying an electrostatic charge to fibers to form a nonwoven web, while Knight and Epstein teach applying an electrostatic charge to an already formed nonwoven web (Br. 4-5).

The Examiner contends that Knight and Epstein provide teachings and motivation to alter the process of Haynes for the recited advantages (Ans. 4 and 7).

The Examiner also contends that the teachings of Knight are applicable to fibers, and Epstein teaches his process is performed on a fiber (Ans. 9).

Accordingly, the issues presented from the record in this appeal are as follows: (1) Have Appellants established that the Examiner reversibly erred in failing to provide any reasoning or rationale for the combination of the references as proposed in the rejection on appeal; and (2) Have Appellants established that the Examiner reversibly erred in combining Haynes with two secondary references that are directed to electrostatic charging units applied to nonwoven webs and not to the fibers per se?

We answer these questions in the negative. For the reasons stated in the Answer and below, we determine that the Examiner properly established a *prima facie* case of obviousness in view of the reference evidence, which

application (Br. 2). Therefore, we consider Appellants' statements to be tantamount to requesting review of the rejection of claim 1, with claims 2-17 standing or falling with independent claim 1. *See* 37 C.F.R. § 41.37(c)(1)(vii).

prima facie case has not been adequately rebutted by Appellants' arguments. Therefore, we AFFIRM the sole ground of rejection presented for review in this appeal.

OPINION

We determine the following Factual Findings (FF) from the record presented in this appeal:

- (1) Haynes discloses a process for forming a nonwoven web comprising providing a source of fibers, subjecting said fibers to an electrostatic charge by passing the fibers through an electrostatic unit having a first side and a second side opposed to each other, where the electrostatic unit has an array of protrusions on the first side, and collecting the fibers on a forming surface to form a nonwoven web (Ans. 3-4; Haynes 4:15-24; 12:19-25; 13:10-18; 14:16-17; and Figs. 1 and 2);
- (2) Haynes teaches the application of an electrostatic charge to the fibers will result in a controlled distribution and orientation of the fibers, thus preventing "roping or clumping" (Abstract; 1:8-14; 3:20-22; 4:3-6; and 16:40-41);
- (3) Haynes teaches use of these nonwoven webs in the production of personal care, protective apparel, and industrial products (Abstract; and 11:24-26);
- (4) Epstein discloses producing crimps to result in greater softness by applying fields of predeterminedly-shaped, unilateral shocks or pulses along the length of a fiber (Ans. 4; col. 1, ll. 10-25 and 61-63; col. 3, ll. 3-8); and

(5) Epstein teaches that the electrodes to which electric field pulses are applied may be side-by-side, or facing each other with the fiber to be crimped passing therebetween, and the production and application of electrical pulses are “well-known,” as are the shaping and arranging of electrodes and electrode systems, “which is also familiar to any cathode ray tube engineer” (Ans. 4; col. 2, ll. 28-36 and 56-64; col. 3, ll. 29-44; and Figs. 7 and 8).²

Under 35 U.S.C. § 103, the factual inquiry into obviousness requires a determination of: (1) the scope and content of the prior art; (2) the differences between the claimed subject matter and the prior art; (3) the level of ordinary skill in the art; and (4) secondary considerations, if any. *See Graham v. John Deere Co.*, 383 U.S. 1, 17-18 (1966). “The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.” *KSR Int’l Co. v. Teleflex, Inc.*, 127 S. Ct. 1727, 1739 (2007). “[W]hen a patent ‘simply arranges old elements with each performing the same function it had been known to perform’ and yields no more than one would expect from such an arrangement, the combination is obvious.” *KSR*, 127 S. Ct. at 1740, quoting *Sakraida v. AG Pro, Inc.*, 425 U.S. 273, 282 (1976).

Applying the preceding legal principles to the Factual Findings (FF) in the record of this appeal, we determine that the Examiner has established a prima facie case of obviousness, which prima facie case has not been adequately rebutted by Appellants’ arguments. As shown by FF (1) listed above, we determine that Haynes discloses every limitation of claim 1 on appeal except the arrangement of the protrusions on the second side of the

² A discussion of Knight is unnecessary to our decision.

electrostatic unit and alternating the electrostatic charge (Ans. 4). As shown by FF (5) listed above, we determine that the arrangement of the electrodes (or protrusions) designed to deliver the electrostatic charge to fibers would have been well within the ordinary skill in this art, including side-by-side and opposite side arrangements. As also shown by FF (5) listed above, we determine that the use of alternating electrostatic charges to the fibers of Haynes would have been well within the skill in this art in view of the teachings of Epstein. As shown by FF (3) and (4) listed above, we determine that one of ordinary skill in this art would have applied the electrostatic charges as taught by Epstein to improve the softness of the products disclosed by Haynes. The claimed combination of known elements has not been shown to yield any more than predictable results (*see* FF (2) and (4) listed above). We note that Appellants have not submitted any evidence of unexpected results for their particular arrangement of electrodes.

For the foregoing reasons and those set forth in the Answer, we sustain the Examiner's rejection of claim 1, and claims 2-17 which stand or fall with claim 1, under § 103(a) over Haynes in view of Knight and Epstein. Therefore, the decision of the Examiner is affirmed.

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No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED

tf/ls

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